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WHAT IS CLAIMED:

1. A method of receiving a plurality of time spaced signals transmitted in accordance with a time layout, comprising:

recovering a receive signal comprising a plurality of time spaced signals that convey at least one intelligence signal,

coherently detecting the receive signal,

integrating, separately, a plurality of coherently detected signals to produce a plurality of integrated detected signals,

contributing each integrated detected signal to one of a plurality of intermediate signals,

integrating, separately, each of said plurality of intermediate signals, and

producing the at least one intelligence signal based on said plurality of integrated signals.

2. The method of claim 1, wherein the intermediate signals are integrated relative to a repeating time layout.

3. The method of claim 1, wherein the intermediate signals are integrated independent of a repeating time layout.

4. The method of claim 1, wherein the time spaced signals are positioned in time in accordance with a time hopping code.

5. The method of claim 1, wherein the time spaced signals are uniformly positioned in time.

6. The method of claim 1, wherein the time spaced signals are modulated in accordance with a modulation technique,

7. The method of claim 6, wherein the modulation technique comprises at least one of:

time shift modulation,

amplitude modulation,

frequency modulation, and

phase modulation.

8. The method of claim 1, wherein the time spaced signals comprise pulses.

9. The method of claim 1, wherein the time spaced signals comprise bursts.

10. The method of claim 1, wherein coherently detecting the received signal comprises correlating the plurality of time spaced signals with a plurality of template signals at specified positions in time.

11. The method of claim 10, wherein a template signal comprises a pulse.

12. The method of claim 10, where a template signal comprises a burst.

13. The method of claim 1, wherein each integrated detected signal is contributed in accordance with a predefined pulse interleaving order.

14. The method of claim 13, wherein the predefined pulse interleaving order is at least one of:

a sequential order; and

a pseudorandom order.

15. The method of claim 1, wherein each integrated detected signal is contributed in accordance with a code element of a pulse interleaving code.

16. The method of claim 15, wherein the pulse interleaving code is a pseudorandom code.

17. The method of claim 15, wherein the pulse interleaving code is modified after an intelligence signal is produced.

18. The method of claim 17, wherein said pulse interleaving code is modified in accordance with a shift code.

19. The method of claim 1, wherein the at least one intelligence signal is produced by ordering the plurality of intermediate signals in accordance with a predefined data bit order.

20. The method of claim 17, wherein the predefined data bit order is at least one of:

a sequential order; and

a pseudorandom order.

21. The method of claim 1, wherein the at least one intelligence signal is produced by ordering the plurality of intermediate signals in accordance with code elements of a bit ordering code.

22. The method of claim 21, wherein the bit ordering code is a pseudorandom code.

23. The method of claim 1, further comprising the steps of:

determining an intermediate signal quality measure;

modifying an integrated detected signal contribution to the intermediate signal based on the intermediate signal quality measure.

24. The method of claim 23, wherein modifying the integrated detected signal contribution comprises:

modifying a pulse interleaving code and

coordinating the modification of the pulse interleaving code between a transmitter and receiver.

25. The method of claim 23, wherein the integrated detected signal contribution is modified based on at least one of:

a statistical redistribution;

a random redistribution, and

an optimal order search algorithm.

26. The method of claim 1 further comprising:

determining an intermediate signal quality measure;

modifying a time hopping code based on the intermediate signal quality measure; and

coordinating the modification of the time hopping code between a transmitter and receiver.

27. The method of claim 26, wherein the time hopping code is modified based on a relationship between a plurality of codes in a code family.

28. The method of claim 1 further comprising:

determining an intermediate signal quality measure;

delaying a pulse train signal based on the intermediate signal quality measure; and

coordinating the delay of the pulse train signal between a transmitter and receiver.

29. The method of claim 28, wherein the pulse train signal is delayed based on a relationship between a plurality of codes in a code family.

30. The method of claim 1, wherein an intermediate signal is compared to another intermediate signal.

31. The method of claim 30, wherein an intermediate signal is used as a reference relative to another intermediate signal.

32. The method of claim 31, wherein an intermediate signal is used as an amplitude reference relative to another intermediate signal.

33. The method of claim 32, wherein the amplitude reference is used to demodulate at least one of said plurality of time spaced signals.

34. The method of claim 32, wherein the amplitude reference is used to synchronize in time a plurality of template signals with the plurality of received time spaced signals.

35. The method of claim 31, wherein an intermediate signal is used as a time reference relative to another intermediate signal.

36. The method of claim 35, wherein the time reference is used to synchronize in time a plurality of template signals with the plurality of received time spaced signals.